

Remarks

Based on the above amendments and the following remarks, Applicants respectfully request that the Examiner reconsider and withdraw the outstanding rejections.

Claim Status

Upon entry of the foregoing amendments, independent claim 60 is pending in the application. Claim 60 has been amended. Support for the claim amendments may be found throughout the Specification. See, for example, at page 17, lines 18-23 and at page 22, lines 25-27. Thus, no new matter is added by way of these amendments, and their entry is respectfully requested.

Claim Rejections Under 35 U.S.C. § 112

Claim 60 is rejected under 35 U.S.C. § 112, second paragraph for failing to particularly point out and distinctly claim the subject matter which applicants regard as the invention.

Amended claim 60 recites a method involving taking a composition from “a temperature between -20°C to +4°C.” Thus, Applicants request that the rejection under 35 U.S.C. § 112, second paragraph be withdrawn.

Claim Rejections Under 35 U.S.C. § 103

Claim 60 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Holmes, in view of Gelfand, Hoeltke and Scalice. Applicants respectfully traverse this rejection.

In proceedings before the Patent and Trademark Office, the Examiner bears the burden of establishing a prima facie case of obviousness based upon the prior art. See *In re Piasecki*, 745 F.2d 1468, 1471-73, 223 USPQ 785, 788 (Fed. Cir. 1984). To meet this burden, the Examiner must show that each claim element is taught or suggested by the prior art. See *In re Royka*, 490 F.2d 981 (CCPA 1974); *In re Glaug*, 283 F.3d 1335 (Fed. Cir. 2002); *In re Rijckaert*, 9 F.3d 1531 (Fed. Cir. 1993).

Amended claim 60 relates to a method for nucleic acid synthesis, sequencing or amplification involving (a) taking from a temperature between -20°C to +4°C a composition comprising a thermostable DNA polymerase, a deoxynucleoside triphosphate, an antibody that binds the thermostable polymerase, and a buffer salt; and then (b) adding nucleic acid molecules to the composition such that the composition is not diluted more than 2x.

The references cited in the Office Action (i.e., Holmes, Gelfand, Hoeltke and Scalice) do not render the claimed method obvious under 35 U.S.C. §103. Holmes teaches methods of performing multiple amplification reactions using different nucleic acid primer pairs and templates. As recognized in the Office Action, Holmes does not teach a master mix, a master mix containing a polymerase-binding antibody, or the use of such a master mix after storage at a temperature between -20°C to +4°C. See Office Action dated April 16, 2007 at page 3. Consequently, the Office Action offered Gelfand for its disclosure of methods for performing multiple reverse transcription reactions wherein a master mix is used. The Office Action further offered Hoeltke for its disclosure of nucleic acid-labeling methods using master mixes said to be stable at temperatures between -20°C to +4°C. Finally, in attempt to cure the combined deficiencies of Holmes, Gelfand, and Hoeltke, the Office Action offered Scalice

for its disclosure of master mixes containing antibodies specific for a thermostable DNA polymerase.

While Gelfand, Hoeltke and Scalice do teach the use of master mixes, none of these references disclose a method as is presently claimed: i.e., where a master mix comprising a thermostable DNA polymerase, a deoxynucleoside triphosphate, an antibody that binds the polymerase, and a buffer salt is taken from a temperature between -20°C to +4°C; and then nucleic acid molecules are added to the mix such that it is not diluted more than 2x.

Specifically, the master mixes that Gelfand discloses lack a polymerase-binding antibody, are assembled “at room temperature” before use, and are diluted more than 2x upon use. See Gelfand, e.g., at column 31, lines 18-30. Similarly, although the Hoeltke reference teaches master mixes said to be stable at temperatures between -20°C to +4°C, it fails to disclose mixes containing a polymerase-binding antibody, and fails to disclose mixes that are not diluted more than 2x by the addition of nucleic acids. See Hoeltke, e.g., at column 2, lines 23-31 and Example 3. Finally, Scalice teaches the use of master mixes containing polymerase-binding antibodies, but does not disclose such a master mix that is stored between -20°C to +4°C, and does not disclose such a master mix that is not diluted more than 2x by the addition of nucleic acids. See Scalice, e.g., at column 17, lines 37-56.

The cited references, alone or in combination, fail to disclose the claimed method. Thus, a prima facie case of obviousness has not been established and Applicants respectfully request that the rejection of claim 60 under 35 U.S.C. § 103(a) be withdrawn.

Conclusion

All of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider and withdraw all presently outstanding rejections. Applicants believe that a full and complete reply has been made to the outstanding Office Action and, as such, the present application is in condition for allowance.

Prompt and favorable consideration of this Amendment and Reply is respectfully requested.

Respectfully submitted,

/Bernadette M. Perfect/
Registration No. 53,267
Bernadette M. Perfect
Patent Agent

Date: September 17, 2007

Invitrogen Corporation
1600 Faraday Avenue
Carlsbad, CA 92008
(760) 476-7120